cvra REPEATERS VA NC SC

REPEATER JOURNAL

CAROLINAS - VIRGINIA REPEATER ASSN, INC
Organized 1971

November 1976 Volume 5 No. 4

ARE YOU INTERESTED IN GETTING ON 220 MHZ ?

Have you made a committment to get on 220 ? Well, if you haven't made the committment, maybe you should give it some thought. Propagation on 220 is very similar to 146 mHz and repeater coverage is virtually the same. Why haven't you decided to buy a rig and try it? Probably for two reasons..... first the equipment is expensive and you had rather spend it on a 2 meter rig; and second there is no activity on 220.

Well my friend, maybe these are not valid reasons any more. If you have not heard by now, several equipment manufacturers have been offering super discounts on their 220 transceivers if purchased by a group, such as in quantities of 20 at a time. For $120- $150 you can get a very nice solid state 220 transceiver.

And repeaters? Why yes, Herman Cone, WB4DBB, operates a very good machine from Durham on 222.34/223.94 (WR4ASZ) and Ken Woodard, WA4BVW, has WR4AEV operating from Mt. Pisgah on the same frequency. Just a few weeks ago, Ray Eggleston, K4KIP, in Graham (near Burlington) stated that he would be putting up a machine on 223.22/224.82. There is a group in Charlotte, headed by Jim Keene, WA4ICM, that plans to buy a number of 220 rigs with the goal of having a repeater in the "Queen City" shortly. Likewise Wayne Williams, K4MOB, is getting a group organized in the Winston/Greensboro area.

I understand that the Durham and Asheville groups have already ordered their rigs, so get in touch with people in this area to see how they made out. Clegg is one of the companies which is giving a good deal and the one which seems to receive the most discussion. On group purchases, Clegg includes crystals for your local repeater frequency along with the standard national simplex frequency 223.50 mHz.

Clegg, Cobra, and Midland each market a rig-- and they are the identical units, with a different nameplate. They are rated as "best buys" in their price range. Features include an S/Relative Power meter and prewired accessory socket. The four pin socket has connections to the microphone, +12 volts on transmit, and discriminator.

The Genave GTX 100 is also a good buy. The price has been steadily dropping with prices now around $ 150.

Jim Labo, KØOST, writing in the Texas VHF-FM Society "News" states that one major consideration when selecting a 225 mHz FM transceiver is receiver

(continued on page 9)

The
REPEATER JOURNAL

Volume 5

No. 4

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W4IZI Associate Membership Chairman

This has been quite a year for CVRA Associate Membership. We have almost doubled in the past twelve months from 450 in August 1975 to 915 in August 1976. It's hard to realize that when I became Associate Membership Chairman in June 1974, there were only 245 Associate Members.

The growth of the CVRA is something I have enjoyed watching with no little amazement. When I happen to go to a Hamfest and set up a little booth, I rarely have to "sell" memberships. For the most part I just listen to ".... I've been wanting to join since Tom showed me his Journal". The CVRA has grown because it is an active and purposeful organization; coordination is the only way repeaters could become useful rather than "competing"; the officers, directors, and Vice Directors have been visible and active in their jobs; the Editor has done a lauditory job in putting together the Journal and the Handbook, making it a publication known and respected both in the CVRA states and nation-wide (we have one Associate Member in Hawaii); and last but no means least, the membership .... it is apparently composed of active hams in VHF who, by their on-the-air examples, have shown what a fine and pleasurable experience Amateur Radio can be. To them is due the credit for VHF becoming a fast growing and popular median. They make newcomers want to learn more about "what's going on" and they seem to get steered to the CVRA.

W4IZI ..... (cont'd)

Another aspect of interest is that 25% are signed up for the next two years and that 75% of all renewals are for two years (something that makes my job easier since that way I don't have to keep up with so many renewal slips).

73's..... Lindsay, W4IZI

EDITOR'S NOTE:
We are now looking for someone to serve as an Assistant Associate Membership Chairman -- one who can attend Hamfests and help in broad membership solicitation. How about it? This is really a "key" job within the Association and one that must be filled by a competent individual if we expect the Associate membership to continue its present growth.

ADVERTISING EDITOR NEEDED FOR "THE REPEATER JOURNAL"

As you can tell from the past few issues, the number of advertisers continues to grow. Only by having a steady number of advertisers can we continue publishing a quality newsletter and hold dues at such a low level.

Soliciting material for the newsletter and typing it are taking just about all the "spare" time I can personally muster. The amount of time I have to spend on the air is just about to dissappear. I just do not have the time it takes to work with advertisers, prepare ads, invoice them, and solicite others.

I would like to have some help in this area. I need the assistance of someone who will take on the responsibility of handling the advertising effort. If you would like to discuss this, or if you know of someone who you think would be able to do this job, please get in touch with me just as soon as possible. Without some assistance, I will just not be able to continue the advertising and publishing efforts both.

How about it?

Bill Parris, K4GHR, 6210 Gothic Court, Charlotte, NC 28210

NEWS FROM EASTERN TENNESSEE

(KINGSPORT, TN) .... The Quad City Radio Club, sponsored by the Bristol, Kingsport, Johnson City, Greeneville, and ETSU Amateur Radio Clubs, held its quarterly meeting in Kingsport on October 16. Special guest Speakers at the meeting were Mr. Angelo Dittv, of the Atlanta FCC office, and Mr. Max Arnold, ARRL Delta Division Director. Mr. Ditty administered quite a few exams on the morning prior to the meeting. A number of amateurs from the Asheville, NC area attended the meeting also. The next meeting of the Quad City Radio Club will be in February 1977, at ETSU in Johnson City. (WA4DBG)

(BRISTOL, VA/TN) .... There is a new repeater on Holston Mountain between Elizabethton and Bristol, Tn operating on 147.60/147.00. No further details available.

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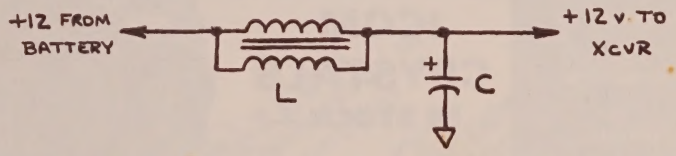
TEKNIKLE TOPIX

by WB4EXW

Do you have problems with alternator whine in the mobile unit? If so, maybe a few of the following tips may help:

Power leads for the rig should have their connections made directly to the vehicle's battery. Do not hook to accessory terminals on the fuse block under the dash or the cigarette liter socket as these points are loaded with noise! It is best to use shielded wire for the long run from the battery to the rig. Coax braid works fine for shielding. Another good point is to use HEAVY wire for the power leads, expecially if one is using an amplifier or plan to add one later. Smaller wire has considerable resistance when numerous amps are drawn thru it. This lowers the voltage (and thus power) available at the rig and we all know what that means — reduced power output. Remember: Transistor amplifier circuits are low voltage, high current circuits and thus low resistance paths must exist for the current to flow. So use large wire — No. 12 or 10 AWG. Also install a suitably sized fuse near the battery for short circuit protection.

Shielding the power leads will have little effect on reducing alternator whine. The reason for this is because the whine is actually a 3-phase ripple superimposed on the +12 vdc battery leads from the alternator charging circuit. This ripple actually amplitude modulates the 12 vdc line and is heard on both received and transmitted signals. A neat and very effective filter is drawn below and an explanation follows.



This LC circuit is actually a low-pass filter and exhibits a high resistance to the alternator whine. As a result, the whine is filtered out and the DC passes. The capacitor, C, is just a 4000 mfd electrolytic capacitor whose rating is 20 vdc or greater. The inductor, L, is made by using a 1/2 inch diameter by 7 inch long ferrite rod (available from Amidon Associates or other manufacturers for triode amplifier heater lead RFC's). Wind on a bifilar winding of No. 14 Formvar insulated copper wire for most of its length. A bifilar winding is made by holding two lengths of wire side-by-side and then close-space winding the two wires on the ferrite rod at the same time. When the winding is complete, connect the two wires on each end of the coil together to form two terminals. This filter will handle 10 amps of current as described and should help greatly.

To simplify matters and shorten the text, I will not go into all the bypassing one may have to do to reduce pulse-type noise pickup from the

ignition system, wiper motor, voltage regulator, and other places. If you have noise problems of this type, consult the chapters of the ARRL Radio Amateur's Handbook and VHF Handbook dealing with mobile operation for solutions. Another good source of information may be your Heath-kit manual for the SB-series. I know my SB-110A manual goes into great detail on how to reduce mobile interference.

Another interesting note that many do not think about (and thanks to Pete, K4CAV, for letting us know about this one) is the alternator charging circuit itself. If you have an alternator whine problem that seems to resist all efforts to reduce it, check the rectifier diodes in the alternator itself. One or more of these diodes may be "open" and as a result, a large AC wave form is impressed on the battery circuit.

That's about it for this issue, gang. One last comment though. I have not been getting any new articles from you guys out there in repeater-land. I know that there are good ideas floating around out there. How about jotting them down some time and sending them to me. You don't have to be explicit and have the article typewritten — I will figure out a good explanation and type it for printing. Let me part by saying that it is not much fun trying to find something to write about when I do not even know what you guys want to hear.

ARE YOU INTERESTED IN GETTING ON 220 MHZ ? (continued from page 1)

image rejection. The problem arises if the receiver uses injection below the desired receive frequency. For 220-225 mHz, using a 10.7 mHz I.F., the images fall between 198.6 and 203.6 mHz. Unfortunately this is TV Channel 11, 198-204 mHz. If this channel is in service in your area, the receiver you choose will need excellent input selectivity and good shielding of the early stages. With a receiver using high side injection the images will fall in the 225-400 mHz military communications band and should present no problems.

The Clegg, Cobra and Midland units all use low side injection while the Genave and Regency units use high side injection.

So how about giving it a try..... make the plunge and try 220.

REPEATER MEMBERSHIP RENEWALS DUE

All member repeaters will have to re-new their memberships on January 1, 1977. Re-newal application blanks are being sent to all Repeater Representatives with this issue of "The Repeater Journal".

The CVRA cannot function without the support of all repeaters in the three state area..... so please see to it that your repeater sends in its dues for 1977.

Annual repeater dues are $6.00, payable to Bill Page, WB4LWX.

Send your in today.

ACT NOW!

NORTH CAROLINA

(SHELBY, NC) ..... Another new CVRA member is WR4AWU, 147.84/147.24, owned by Lee Harris, WB4KPF. The machine is made up of Motorola equipment which is arranged in a split site configuration. Currently the repeater is at a temporary site but will be moved to its permanent location within the next few months. The permanent site will be south of Shelby off Highway 180 on two 100' commercial towers approximately 2 miles apart. The receiving antenna will be a Stationmaster and the transmitting antenna will be a Ringo. Repeater ID will be via CW, control by telephone lines, and access will be by carrier. The autopatch may be accessed by the "*" and disconnected by the "#". The transmitter will run 50 watts output. Representatives to the CVRA are Lee Harris, WB4KPF, and Rusty Elliott, WB4RYB.

(LUMBERTON, NC) .... WR4AUA is the new call for the Lumberton Repeater to be operated on 147.81/147.21. The Lumber River Radio Relay League sponsors this machine which has a Ringo Ranger on top of a 140' water tank. The repeater is being tested now and should be on the air full time in the near future.

(FAYETTEVILLE, NC) .... WR4ADK, 147.93/147.33, owned by Bill Finch, W4EHF, is on the air in Fayetteville. Coverage is limited.

(CHARLOTTE, NC) .... WB4KOH, Jack Davis, has begun testing his repeater from his home QTH under the call of WR4AFU/4. The machine consists of GE Prog Line strips. Frequency is 147.99/147.39. Coverage is limited and the machine is on the air during the evenings. A permanent site will be selected shortly.

(CHARLOTTE, NC) .... WR4AJX, 147.30/147.90, has recently moved to the standard 600 kHz split but remains reversed from the other repeaters in the area.

(GASTONIA, NC) .... Bill Cook, W4REW, continues the construction work on his repeater to be on 147.72/147.12 to be located at the WBTV site on Spencer Mountain. No start up date has been announced.

(KINGS MOUNTAIN, NC) ..... Still no word on the proposed repeater for this area.

(BENSON, NC) .... WR4ARL is the new call for the Benson Repeater, 147.87/147.27, after over one year's wait. The machine is running 100 watts DC to an extended collinear array at 150' on the Benson Water Tank. The new receiver is hearing very well and has extended mobile coverage to the 30-40 mile range. An autopatch has also been installed. CVRA Reps are WA4IXT and WB4AXH.

(ASHEVILLE, NC) .... Welcome to CVRA WR4ANY, 146.31/146.91, located on Spivey Mountain, 5 miles west of Asheville. Bob Herman, WB4ELA, and Jim Carrier, WA4MKI, are owners of the machine which is sponsored by the Spivey Mountain Repeater club. The repeater is composed of Motorola units feeding through a Sinclair duplexer into separate antennas; receiving on a Sinclair Model 224 4 dipole array; transmitting on a Hustler C6-T44A. The antennas are located at 3377' above MSL and 999' HAAT..... and Bob says that it really is 999'. Good mobile coverage is provided to the NC counties of Buncombe, Madison, Henderson, and Haywood. Repeater ID is via CW and control is via telephone. The autopatch may be accessed by the * and disconnected by the #. The autopatch covers the Asheville, Arden, Black Mtn, Enka/ Candler, Weaverville, Swannanoa, Leicester and Fairview exchanges. RTTY is allowed through the machine and all control stations monitor narrow shift autostart. CVRA Reps are WB4ELA and WA4CNI.

SOUTH CAROLINA

(CHARLESTON, SC) ..... New Officers of the Holiday VHF Society include President: B. E. Pennington, W4YOH; Vice Pres: G. C. Clute, WB4GPS; Sec/Treas: R. L. Camp, WB4URP.

(CHARLESTON, SC) .... WR4ASP, 16/76, which is operational from the "Yorktown" now is equipped with an autopatch, * Up, # down. The machine requires a 1477 tone in order to access. This is the same tone that is required to access the 34/94 machine in Charleston. K4ILT is Custodian.

(CHARLESTON, SC) .... WB4THH has a repeater on 146.10/146.70 which is operational whenever Bob is in town. A 1477 Hz tone is required for access. It is also equipped with an autopatch.

(CHARLESTON, SC) .... WB4URP has a repeater ready to go although a frequency has not been selected as yet.

(GOOSE CREEK, SC) .... The Trident Radio Club is working on a repeater for here to be on 147.81/147.21. The equipment nor license is ready as yet. John Bradway, WB4LET, is President of the club.

(SUMTER, SC) ....The Sumter Area Amateur Radio Repeater Association, sponsor of WR4AOI, 146.10/146.70, have been making a lot of improvements in their machine lately. A new Phelps-Dodge Antenna was installed on August 22, and an autopatch is on hand and will be installed shortly. Plans have been finalized for equipping the repeater with a complete battery powered power supply for emergencies. W4PDN won the TS-820 which was given away at the Shelby Hamfest. If you are in the area on Monday nights, be sure to check into the net at 2130. Rumor has it that the group may be thinking of changing the repeater frequency to 04/64 due to interference from Lancaster.

(ORANGEBURG, SC) .... WR4AQY, 147.69/147.09, is on the air and working well. The autopatch has been connected and appears to be working fine. K4IPG is moving to Tennessee and will be missed by the club. Ken has been one of the more influential club members in getting the machine going. This repeater is sponsored by the Orangeburg ARC.

(WHITE HALL, SC) ..... WR4AQL, 146.31/146.91, continues to give excellent service along I-95 between Savannah and Charleston. Some antenna work to improve coverage will be made the next time the tower contractor is in town.

(CHARLESTON, SC) .... The Charles Towne Hamfest held in July was well attended and was the largest Hamfest ever held in the area. The Municipal Auditorium provides an outstanding location for dealers and the flea market. The 77 Hamfest will be held on July 10..... see you there.

(CHARLESTON, SC) ..... Do you operate 450 mHz ? WR4ASP will soon have the 449.1/444.5 repeater in service.

(COLUMBIA, SC) ..... WR4ASE is the new call for the 147.96/147.36 machine sponsored by the Carolina Repeater Society. This repeater is equipped with an autopatch.

(ANDERSON, SC) .... WR4AIO, 146.37/146.97, will soon be equipped with an autopatch.

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The 12 channel 220 MHz FM Transceiver

10 watts power out/12 channel transmit and receive capability

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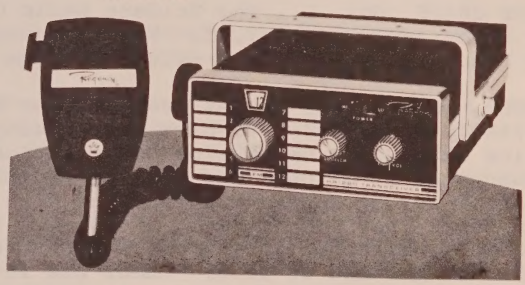

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025/625	KANNAPOLIS		NEW MARKET
04 /64	ASHEVILLE, RALEIGH	SUMTER	RICHMOND
	WINSTON-SALEM		
055/655			ALEXANDRIA
07 /67	BURLINGTON, FOREST CITY		BARREN SPRINGS
	LAURINBURG		
085/685			MC LEAN
10 /70	GREENVILLE(TN), MARION	LANCASTER, CHARLESTON	DANVILLE, RICHMOND
			PORTSMOUTH
13 /73	SALISBURY	NO. AUGUSTA	HAMPTON, ROANOKE
145/745	KINGSPORT(TN)		
16 /76	GRIFTON, GREENSBORO	CHARLESTON, COLUMBIA	LYNCHBURG,BLUEFIELD(WV)
	ASHEVILLE		CHARLOTTESVILLE
19 /79	HIGH PT, JOHNSON CTY(TN)	LAVONIA(GA), CHESTER	CHESAPEAKE, FAIRFAX
22 /82	DURHAM, ROARING GAP	GREENVILLE	WINCHESTER, ARLINGTON
	WILMINGTON		
235/835		COLUMBIA(147.255 IN)	
25 /85	HICKORY, REIDSVILLE	LAURENS	AFTON
	SEVEN SPRINGS		
28 /88	RALEIGH, SHELBY	COLUMBIA, SAVANNAH(GA)	BRISTOL, ROANOKE
	BRISTOL(TN)		RICHMOND
31 /91	FAYETTEVILLE, LEXINGTON	WHITE HALL	TYSONS CORNER,FARMVILLE
	MURFREESBORO, ASHEVILLE		BLACKSBURG
34 /94	AURORA, BEULAVILLE	CHARLESTON, COLUMBIA	HAMPTON, ROANOKE
	CHARLOTTE, DURHAM,	GREENVILLE,AUGUSTA(GA)	RICHMOND
	JACKSONVILLE, MANTEO		
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40 /00	HIGH POINT, JACKSONVILLE	PICKENS	SUFFOLK
60 /00	BRISTOL(TN)		
43 /03	IRWIN	ROCK HILL	RICHMOND, BLACKSBURG
63 /03	GREENSBORO		
46 /06	CHARLOTTE,ELIZABETH CITY		SOUTH BOSTON
69 /09	GREENVILLE	ORANGEBURG	GALAX
72 /12	GREENSBORO, ROCKY MOUNT		WARRENTON,CULPEPPER
	GASTONIA		
75 /15	DURHAM, MORGANTON	GREENWOOD	
78 /18	BURLINGTON, CHARLOTTE		
81 /21	LAKE TOXAWAY, GREENSBORO	GOOSE CREEK	MC LEAN
	LUMBERTON, GASTONIA		
84 /24	FRANKLIN, SHELBY		WOODBRIDGE, SOUTH HILL
87 /27	GREENSBORO, BENSON	CLEMSON	
90 /30	CHARLOTE(30/90)		PETERSBURG, BERRYVILLE
915/315			ALEXANDRIA
93 /33	LENOIR, FAYETTEVILLE	AUGUSTA(GA)	LEXINGTON
96 /36	ROANOKE RAPIDS, BOONE	COLUMBIA	WASHINGTON(DC)
99 /39	CHARLOTTE, EDEN		PETERSBURG

North Carolina

ASHEVILLE	WR4ALC	146.04	146.64	
ASHEVILLE	WR4AEV	146.16	146.76	C
ASHEVILLE	WR4ANY	146.31	146.91	CA
AURORA	WR4ABQ	146.34	146.94	C
BENSON	WR4ARL	147.87	147.27	CA
BEULAVILLE	WR4ADS	146.34	146.94	C O
BOONE	WR4ATQ	147.96	147.36	
BURLINGTON	WR4AKY	146.07	146.67	C
BURLINGTON	WR4AIF	147.78	147.18	
CHARLOTTE	WR4ABT	146.22	146.82	O
CHARLOTTE	WR4AEU	146.34	146.94	CA
CHARLOTTE	*WR4AFU	147.99	147.39	C
CHARLOTTE	WR4ALO	146.46	147.06	CA
CHARLOTTE	WR4ABK	147.78	147.18	C
CHARLOTTE	WR4AJX	147.30	147.90	
DURHAM	WR4AJY	146.34	146.94	AT
DURHAM	WR4AJV	147.75	147.15	
DURHAM	WR4AGC	146.22	146.82	CA
EDEN	WR4	147.99	147.39	P
ELIZABETH CTY	WR4ADN	146.46	147.06	CAT
FAYETTEVILLE	WR4ANN	146.31	146.91	CA
FAYETTEVILLE	WR4ADK	147.93	147.33	C
FOREST CITY	WR4AHA	146.07	146.67	C T
FRANKLIN	WR4ALD	147.84	147.24	
GASTONIA	WR4	147.72	147.12	U
GASTONIA	WR4	147.81	147.21	AU
GREENSBORO	WR4AOD	146.16	146.76	C
GREENSBORO	WR4ANP	147.72	147.12	C
GREENSBORO	WR4ANL	147.81	147.21	
GREENSBORO	WR4AWZ	147.63	147.03	A
GREENSBORO	WR4	147.87	147.27	AP
GREENVILLE	WR4AMB	147.69	147.09	CA
GRIFTON	WR4ABP	146.16	146.76	C
HICKORY	WR4ACM	146.25	146.85	C
HIGH POINT	WR4AFV	146.19	146.79	C
HIGH POINT	WR4ADT	146.40	147.00	CA
IRWIN	WR4ALY	146.43	146.43	U
JACKSONVILLE	WR4AJG	146.40	147.00	CA
JACKSONVILLE	WR4ATW	146.34	146.94	CA
KANNAPOLIS	WR4	146.055	146.655	U
LAKE TOXAWAY	WR4AGH	147.81	147.21	U
LAURINBURG	WR4AOX	146.07	146.67	C
LENOIR	WR4ARG	147.93	147.33	C
LEXINGTON	WR4ABX	146.31	146.91	CA
LUMBERTON	WR4AUA	147.81	147.21	
MANTEO	WR4AKB	146.34	146.94	C
MARION	WR4	146.10	146.70	U
MORGANTON	WR4AQI	147.75	147.15	C
MT. AIRY	WR4ACJ	146.37	146.97	C
MURFREESBORO	WR4AFB	146.31	146.91	CA
RALEIGH	WR4ACF	146.04	146.64	C
RALEIGH	WR4AOE	146.28	146.88	CA
REIDSVILLE	WR4ADE	146.25	146.85	C
ROANOKE RAPDS	WR4	147.96	147.36	P
ROARING GAP	WR4AGS	146.22	146.82	C
ROCKY MOUNT	WR4	147.72	147.12	C U
SALISBURY	WR4AAA	146.13	146.73	CA
SEVEN SPRNGS	WR4AEF	146.25	146.85	C
SHELBY	WR4ABF	146.28	146.88	C
SHELBY	WR4AWU	147.84	147.24	C
SMITHFIELD	WR4	146.37	147.97	AU
STATESVILLE	WR4	146.01	146.61	C U
WILMINGTON	WR4AHL	146.22	146.82	C
WINSTON-SALEM	WR4ARD	146.04	146.64	CA

ASHEVILLE	WR4ALC	52.01	53.99	U
CARY	WR4	52.35	53.35	P
DURHAM	WR4ASZ	52.15	53.15	C
GREENSBORO	WR4	52.07	53.07	P
HICKORY	WR4ACM	52.78	52.525	C
MOCKSVILLE	WR4AJD	52.76	52.525	

ASHEVILLE	WR4AKR	222.34	223.94	C
DURHAM	WR4ASZ	222.34	223.94	C
GRAHAM	WR4	223.22	224.82	U
RALEIGH	WR4	223.34	224.94	U
COLFAX	WR4	223.28	224.88	U

ASHEVILLE	WR4ALE	449.90	445.90	C U
CHARLOTTE	WR4AEI	450 PRIVATE		
CONCORD	WR4	PLANNED		
DURHAM	WR4AGC	449.10	444.10	CA
HIGH POINT	WR4ADT	447.90	442.90	
MOYOCK	WR4			P
WINSTON-SALEM	WR4AOW	448.00	443.00	U

Virginia

ABINGDON	WR4ATJ	146.01	146.61	
AFTON	WR4	146.25	146.85	P
ALEXANDRIA	WR4ATZ	147.915	147.315	
ALEXANDRIA	WR4AXB	146.055	146.655	
ARLINGTON	WR4AQP	146.22	146.82	
BARREN SPRNGS	WR4AFQ	146.07	146.67	
BERRYVILLE	WR4APE	147.90	147.30	C L
BLACKSBURG	WR4AXT	146.31	146.91	U
BRISTOL	WR4AFZ	146.28	146.88	
BULL RUN	WR4ADZ	146.37	146.97	T
CHARLOTESVILE	WR4ADV	146.28	146.88	
CHESAPEAKE	WR4ACN	146.19	146.79	CA
CULPEPPER	WR4	147.72	147.12	
DANVILLE	WR4AHG	146.10	146.70	
FAIRFAX	WR4AAD	146.19	146.79	
FARMVILLE	WR4ASW	146.31	146.91	C
GALAX	WR4AHR	147.69	147.09	C
HAMPTON	WR4ALW	146.13	146.73	
HAMPTON	WR4AFT	146.34	146.94	T
LEXINGTON	WR4ABU	147.93	147.33	
LYNCHBURG	WR4AXO	146.01	146.61	C
LYNCHBURG	WR4AEN	146.16	146.76	
MC LEAN	WR4APC	147.81	147.21	
MC LEAN	WR4	146.085	146.685	P
NEW MARKET	WR4ATG	146.025	146.625	P
PETERSBURG	WR4ATB	147.90	146.30	P
PETERSBURG	WR4AWC	147.99	147.39	
PORTSMOUTH	WR4ANT	146.10	146.70	C U
RICHMOND	WR4ADI	146.34	146.94	T
RICHMOND	WR4ACW	146.28	146.88	CAT
RICHMOND	*WR4ACW	146.43	147.03	C
RICHMOND	*WR4ACW	146.10	146.70	R
RICHMOND	WR4	146.04	146.64	P
ROANOKE	WR4AMQ	146.13	146.73	U
ROANOKE	WR4AFE	146.28	146.88	C
ROANOKE	WR4AFY	146.38	146.98	C
ROANOKE	WR4AHT	146.34	146.94	
SOUTH BOSTON	WR4	146.46	147.06	P
SOUTH HILL	WR4APF	147.84	147.24	U
STAUNTON	WR4ACL	146.37	146.97	C
SUFFOLK	WR4AKS	146.40	147.00	CA
TYSON'S CORNR	WR4ABR	146.31	146.91	
VIRGINIA BCH	WR4AAC	146.37	146.97	CA
WARRENTON	WR4	147.72	147.12	P
WASHINGTON(DC)	WR3AGX	147.96	147.36	
WINCHESTER	WR4AGT	146.22	146.82	C
WOODBRIDGE	WR4AII	147.84	147.24	

C CVRA MEMBER
A AUTOPATCH
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* ALTERNATE FREQUENCY
R RTTY ONLY
L PL (CONTINUOUS TONE RQD)
U UNDER CONSTRUCTION
P PROPOSED
O OFF AIR TEMPORARILY
\# TEMPORARY CALL
V TELEVISION

South Carolina

ANDERSON		WR4AIO	146.37	146.97	CA
CHARLESTON		WR4ASP	146.16	146.76	A
CHARLESTON		WR4	146.10	146.70	A
CHARLESTON		WR4AFX	146.34	146.94	C T
CHESTER		WR4	146.19	146.79	U
CLEMSON		WR4	147.87	147.27	P
COLUMBIA		WR4ASE	147.96	147.36	CA
COLUMBIA		WR4ACD	146.34	146.94	C T
COLUMBIA		WR4ABA	146.28	146.88	C
COLUMBIA	#	WR4ACD	146.16	146.76	C T
COLUMBIA		WR4	147.255	146.835	
FLORENCE		WR4AGM	146.37	146.97	C
GOOSE CREEK		WR4	147.81	147.21	U
GREENVILLE		WR4ADG	146.01	146.61	C
GREENVILLE		WR4ABG	146.34	146.94	C T
GREENVILLE		WR4AHJ	146.22	146.82	CA
GREENVILLE		WR4AIB	146.10	146.70	C U
GREENWOOD		WR4AUE	147.75	147.15	C
LANCASTER		WR4ABM	146.10	146.70	
LAURENS		WR4	146.25	146.85	U
MYRTLE BEACH		WR4AXC	146.01	146.61	
NORTH AUGUSTA		WR4ABB	146.13	146.73	C
ORANGEBURG		WR4AQY	147.69	147.09	C
PICKENS		WR4ADP	146.40	147.00	C
ROCK HILL		WR4AJO	146.43	147.03	C
SUMTER		WR4AOI	146.04	146.64	C
WHITE HALL		WR4AQL	146.31	146.91	C
CHARLESTON		WR4ASP	449.10	444.50	C U
COLUMBIA		WR4	52.05	53.05	U

Virginia

ALEXANDRIA	WR4ANC	442.05	447.05	
ALEXANDRIA	WR4AAG	439.25	427.25	V
CHESAPEAKE	WR4ACN	449.95	444.95	C P
FT. BELVOIR	WR4AJT	444.125	449.125	
PARIS	WR4ANJ	444.80	449.80	
RICHMOND	WR4	444.50	449.50P	
ROANOKE	WR4AHT	447.75	443.75	U
TYSONS CORNER	WR4ABR	444.75	449.75	
LEXINGTON	WR4ABU	52.01	53.01	P
NORFOLK	WR4			P
TYSONS CORNER	WR4AEY	222.34	223.94	
WOODBRIDGE	WR4AIJ	223.22	224.82	P

AMSAT's AOD project is to be launched on last NDAA ITOS mission sometime in July 1977. Satellite data:

Transponder 1: Uplink = 145.85 - 145.95
Downlink = 29.40 - 29.50
Beacon = 29.40

Transponder 2: Uplink = 145.90 - 145.95
Downlink = 435.15 - 435.10
Beacon = 435.095

The 2m to 70cm Transponder was built by JAMSAT and has 4 watts PEP output. The satellite will contain very simple four command control system. Telemetry will be 16 channels of Morse Code type as in AO6. Orbit will be similar to AO6 and AO7.

AMSAT's Phase III satellite will be launched in December 1979 by the European Space Agency (ESA). This satellite will be the only piggy back payload. Final orbit for the Phase III spacecraft will be:

Apogee = 35,800 KM (22,249 miles)
Perigee = 1,500 KM (932 miles)
Inclination = 64°
Period = 11 hours

This 64° inclination is optimum value as the apogee will remain stationary making tracking simple.

The two Monday's (GMT) of the month that are mode B days on AO7 are to be QRP days. Stations are not to use more than 10 watts ERP to access the satellite.

Also AMSAT is going to run QRP test on AO6. Wednesday (GMT) are QRP days with a 10 watt ERP limit. Spacecraft to be operational during the entire day. Initial test dates are January 5 and 19 and February 2 and 16.

We wish you a very Pleasant
Thanksgiving and Holiday Season.

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(REIDSVILLE, NC) .... WR4ADE, 146.25/146.85, continues to give good coverage throughout Rockingham County. The owners report activity is picking up and plans are in the making for the installation of autopatch facilities in the near future.

(GREENSBORO, NC) .... WR4AWZ, 147.63/147.03, Greensboro's 4th repeater went on the air in October. The new machine, operating temporarily from the home of Elliott, WB4CFK, will be moved to its permanent location in Greensboro soon. It will also be equipped with autopatch facilities.

(GREENSBORO, NC) .... The NC 2m SSB Net began operations on 145.025 mHz on November 2. The SSB Net meets each Tuesday evening at 2000 local time with Net Control Stations located in Greensboro.

(WINSTON-SALEM, NC) .... A group of Forsyth County Amateurs are strongly considering putting a repeater in or near Winston-Salem. The group is now in the organizational stage. Their spokesman said they will coordinate through the CVRA for frequency coordination.

(EDEN, NC) ... A group of local amateurs around Eden are organizing into a repeater group for the purpose of placing a machine in that area. The group was recommended the frequency 147.99/147.39 as a possibility for that area by the CVRA Frequency Coordinating Committee.

(KANNAPOLIS, NC) .... Frequency coordination was requested by a group in Kannapolis for the purpose of placing a repeater in that area. They were recommended 146.055/146.655, the first split-split channel in the state. No other information on this proposed repeater is available.

(MARION, NC) ..... A repeater is being planned for Marion in the near future. Frequency coordination is being worked out by CVRA.

(HICKORY, NC) .... A second repeater is in the works for this area. Frequency coordination by CVRA has been requested but no further information is available at this time.

(BOONE, NC) .... WR4ATQ, 147.96/147.36, the long-awaited Boone Repeater is now on the air. Initial testing was begun October 17. The machine is located on Rich Mountain overlooking the city of Boone, at 4800'. The antenna system consists of a North Shore duplexer and a Stationmaster. The Watauga County ARS has been formed to support the repeater which will operate 24 hours per day. Autopatch facilities are being planned. Base station coverage is expected Eastward to Raleigh, southward to the NC/SC line, and Westward to Eastern Tennessee. WA4KDB is the repeater Trustee. W4MBN, WB4DYD, and WA4KDB were all involved in working on the construction of the machine.

(GREENSBORO, NC) .... Construction is underway for a 6 meter repeater for the Greensboro area. The frequency of 52.07/53.07 has been recommended by CVRA.

(CONCORD, NC) .... W4DSU and WN4UPO are leading a group that is planning a 450 mHz repeater for this area. No frequency has been determined as yet. Anyone interested in 450 mHz activity should contact Tom Blanchard, WN4UPO, 183 Marshdale, Concord, NC 28025.

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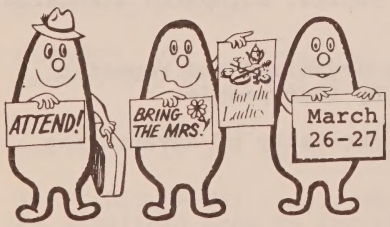

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CVRA BOARD MEETING MINUTES

The CVRA Board Meeting of September 4, 1976 was called to order by the President, Ed Alderman, WA4PEN, at 1935 in the Governor's Inn, Shelby, NC. The new organizational structure approval was the first announcement. Bill Parris, K4GHR, noted that the existing structure has been somewhat cumbersome and that the new structure offers much greater opportunity for coordinated effort.

Al Ross, K4CAW, presented a synopsis of the current budget and pronounced it "improved" over last year at the same time.

Lindsay Cleveland, W4IZI, Associate Membership Chairman, stated that we are averaging 100 new members per month.

Bill Page, WB4LWX, Repeater Membership Chairman, stated that there are 71 member repeaters as of this date.

Tom Gimbert reported on the Charlottesville, Va coordination and expects the New Market, Va. 025/625 machine to be operational in one month.

Danny Hampton, K4ITL, reported the Eastern District to be quiet.

Al Dyson, W4PDL, reported that problems are being experienced with the 13/73 repeater in West Virginia and the uncoordinated 01/61 machine in Wytheville.

Wayne Williams, K4MOB, reported on the status of the Boone (96/36), Kannapolis (025/625), and Greensboro (87/27) machines. Wayne also stated that the member repeaters in the Piedmont District would like to see some standards set for access and disconnect on autopatches along with recommended operating procedures.

Dan McMillin, W4DGE, was asked to investigate the autopatch standards question.

Hugh Minton, K4FR, gave a report from the Southern District.

Wade Holland, W4AZT, was welcomed as the new Director of the Western District. Wade reported on several new machines in his area.

Watson Gabriel, WB4EXW, Technical Editor of the "Repeater Journal" commented on the availability of power supply plans, linking topics, autopatch standards, and a TT decoder.

Dan McMillin, W4DGE, noted that the FCC has been re-organized and repeater applications are now being processed in Gettysburg by four people.

Rusty Elliott, WB4RYB, reported on the success and necessity of advertising in "The Repeater Journal".

The following motions were presented:

Tom Gimbert, K4PQD, suggested that a committee be established to evaluate and revise the CVRA Frequency Coordination Procedures. The motion was seconded by Carter Cogle, K4ARO, and carried by majority vote. The committee will include Tom Gimbert, K4PQD, Chairman, Charles Durst, WA4WTX, and Wade Holland, W4AZT.

Charles Durst, WA4WTX, made a motion to support the Iowa Repeater Council proposal to create more repeater frequency space on two meters and oppose the ARRL proposal to allow Novices on two meters in the 145 mHz area. The motion was defeated.

Danny Hampton, K4ITL, moved that CVRA oppose the ARRL proposal for Novice privileges on 144/220 mHz. This was carried by simple majority and the Secretary was directed to so notify the ARRL.

Danny Hampton, K4ITL, moved that CVRA endorse split channel repeater assignments for 2 meters. Additional elements of this proposal are: educate users as to problems, and encourage use of 220 mHz; splits should be recommended based on sound engineering studies by the Frequency Coordinator; and inputs and outputs will maintain the same relationship as existing standards in the 146-147 region. (e.g. low-in @ 146 and high-in @ 147). This motion was carried.

Tom Gimbert, K4PQD, recommended that CVRA request the FCC stay the 3 KHz deviation limits on 6 meters. The motion was passed.

The topic of Decals was introduced, but tabled.

The meeting was adjourned at 2215.

Carter Cogle, K4ARO
Secretary

V I R G I N I A

(RICHMOND, VA) .... WR4ACW, 146.28/146.88, is going all solid state, a project which should be completed around January 1, 1977. They are now using one antenna and a North Shore 6 cavity duplexer kit. Also operating from the same site and using the WR4ACW call temporarily is a 10/70 teletype only (regenative) repeater.

(PORTSMOUTH, VA) ... WR4ANT, 146.10/146.70, is still in the testing stage at WB4OSQ's house.

(HAMPTON, VA) .... WR4ALW, 146.13/146.73, is up and running atop the Chamberlain Hotel and soundin' good.

(SOUTH BOSTON, VA) .... 146.46/147.06 will be the frequency for a future machine to be set up by Charles Lowery, WB4YWH.

(BLUEFIELD, W VA) ..... WR4AXS will be the call of a new machine serving the Bluefield area on 146.16/146.76.

(AFTON, VA) .... Neil Buckingham, WA4KKL, is planning on a repeater on 146.25/146.85 for this area.

(BLACKSBURG, VA) ..... William Suffa, WB4CZQ, plans to activate WR4AXT on 146.31/146.91 in the near future.

(ELIZABETH CITY, NC) .... WR4ADN, 146.46/147.06, at Elizabeth City and WR4AFB, 146.31/146.91, at Murfreesboro (Ahoskie) are being equipped for linking. Both repeaters are now transmitting the CTS tones. Linking will be via 2 meters. Dial *27 on either machine to link.

(MANTEO, NC) ... WR4AKB, 146.34/146.94, is scheduled to be relocated to the top of the Ramada Inn in Nags Head sometime in late 1976. It will be using a GAM TG-5 antenna at around 150 feet above the terrain with only about 40 feet of feedline. This is a major improvement over the present location. The antenna will be a WA4JZX project and the repeater is run by W4PCN. The Ramada Inn Manager is WA4FLW.

(NAGS HEAD, NC) .... Plans for a repeater on the new 470 foot tower on Bodie Island have been tabled in view of the relocation of the Manteo Repeater.

(ROCKY MOUNT, NC) .... The 147.72/147.12 machine is operating under test conditions.

(JACKSONVILLE, NC) .... Welcome to the CVRA Stan Rogers, WA4LZP, owner of WR4ATW which is operational on 146.34/146.94. The machine is on during the weekends at present while all the bugs are being worked out.

(JACKSONVILLE, NC) .... The Onslow ARC, sponsor of WR4AJG, 146.40/147.00, participated in "Operation Broomstick II" on Halloween night expanding the eyes and ears of the Jacksonville Police Department. WA4TLI and WA4VBC coordinated the effort.

(JACKSONVILLE, NC) .... New Officers of the Onslow ARC are President, Bert Carter, WA4TLI; Vice President, Ken Allinson, WB4ERZ; and Secretary/ Treasurer, Ron Kruk, WA4MMS.

(STATESVILLE, NC) .... On Oct 9, the "Iredell County Amateur Radio Society" was formed. Over 30 persons attended the first meeting. The new club voted to sponsor the planned Statesville Repeater due to be installed on 01/61. The repeater has been received and placed on the air in a test mode. License has been applied for. The duplexer will be ordered before the end of the year. One Novice Class was completed on August 30 with 15 persons being licensed. Another class was started this month, with WB4WSA, a graduate of the first class instructing. Organizers of the new club include K4PAJ, WB4YWZ, WA4WRY, WB4WSA, and W4JOP.

(SEVEN SPRINGS, NC) .... WR4AEF, 146.25/146.85, now has an autopatch in operation financed by the 21 member Seven Springs Autopatch Support Group. Membership is $25.00 annually. The autopatch provides local mobile telephone service into Goldsboro, Kinston, and Moss Hill telephone exchanges. Access is with the * and disconnect with the #.

(BEULAVILLE, NC) .... WR4ADS, 146.34/146.94, has been off the air for an extended period with equipment difficulties. Owner, WA4UMH, still has plans to put this machine back into full service.

(GREENSBORO, NC) ..... Construction has begun on the new repeater of the Greensboro Amateur Radio Association to operate on 147.87/147.27. The new facility will be an autopatch equipped, carrier operated, open repeater, operating from the top of the Northwestern Bank building in downtown Greensboro. Other srevices are planned for the future. The GARS group has 25 members and continues to grow. A tentative onthe air date has not been announced, but the machine should be operating by the end of the year.

(GREENVILLE, SC) .... WR4AHJ, 146.22/146.82, will be relocated on top of Paris Mountain shortly to give better coverage to Spartenburg and Laurens Counties. This machine is now owned and operated by the Blue Ridge ARS.

(GREENVILLE, SC) .... WR4ADG, 146.01/146.61, a wide coverage machine operated by the Blue Ridge ARS, has a net each evening at 2100 averaging over 1200 check ins each month. Many out of town stations check in all the way from Charlotte to Atlanta.

(GREENVILLE, SC) .... WR4AIV owned by Tom Norman is no longer active. He may decide to try another repeater later.

(GREENWOOD, SC) .... Welcome to the CVRA WR4AUE sponsored by the Piedmont TEC Amateur Radio Club. This machine soon to be active on 147.75/147.15 will provide good mobile coverage to the counties of Greenwood, Abbeville, McCormick, Laurens, and Edgefield, from its site atop the Self Memorial Hospital in Greenwood. Equipment consists of Motorola Sensicon and 80D units Two 5/8 verticals will initially be used as antennas, with a duplexer and Stationmaster planned. ID is via CW and control is telephone. 24 hour emergency power is provided. Representatives to the CVRA area Joe Murph, WB4UGA and Barry Bridges, WA4DZG.

(GREER, SC) .... WR4ABG, 146.34/146.94, will soon be accessible by pressing button 7 on a touchtone pad. This will be an extra method of access. The 2400 Hz burst currently in use will remain also.

(COLUMBIA, SC) .... The Palmetto Chapter of QCWA held its annual dinner in Columbia October 23. 1977 President is W4AZT, 1st Vice Pres is W4DAW, and 2nd Vice Pres is W4HDO. Phil Wicker, W4ACY became member no. 73.

(GREENVILLE, SC) .... The DUTCH LUNCH CLUB meets every Monday at the S & S Cafeteria. All Hams welcome. Meet in the lobby at 1245 -- lunch is at 1300. Ten to twenty-five hams from Anderson to Gastonia show up at the lunch.

(CHESTER, SC) ..... Robert Strickland, WB4DTK, has approached CVRA for a frequency recommendation-- 146.19/146.79 has been reserved for this machine.

(MYRTLE BEACH, SC) .... WR4AXC, 146.01/146.61, is now operational from its site atop a CATV tower near Conway. Power output is down from what it will eventually be, but the receiver appears to be doing a very good job.

LATE FCC AMATEUR RULES CHANGES..... from HR Report, Nr. 117

"Mobile 4" and "Portable 4" will no longer be required after November 26. The FCC recently acted on Docket 20686 which eliminates the requirement that amateurs indicate portable or mobile status when signing their calls. They also dropped the need for the amateur to notify the FCC when he plans to operate for an extended period of time away from his licensed premises.

The one exception to the rule is a foreign amateur operating in the US with his foreign callsign.

Amateurs may still identify their status in the traditional manner when and if they so desire and it's likely that rules for many contests will be change to require portable and mobile identification.

Look for a complete review of the new rules in QST and don't jump the gun on the November 26 date.

1976 NORTH CAROLINA QSO PARTY

All amateurs are invited to participate in the 1976 NC QSO Party sponsored by K4EG, the Alamance Amateur Radio Club, Inc. Contest begins at 1900Z, 4 December 1976 and ends at 0100Z, 6 December 1976. Out of state stations count each NC contact as one point with the total number of counties serving as multipliers. The same station worked on different band,mode, or in different county counts as a new contact. North Carolina stations count one point for each contact with each state, province, and foreign country serving as the multipliers. North Carolina mobiles use number of counties operated from for additional multipliers. Logs must be submitted to the Alamance ARC, 2822 Westchester Dr., Burlington, NC 27215, by 10 Jan 1977.

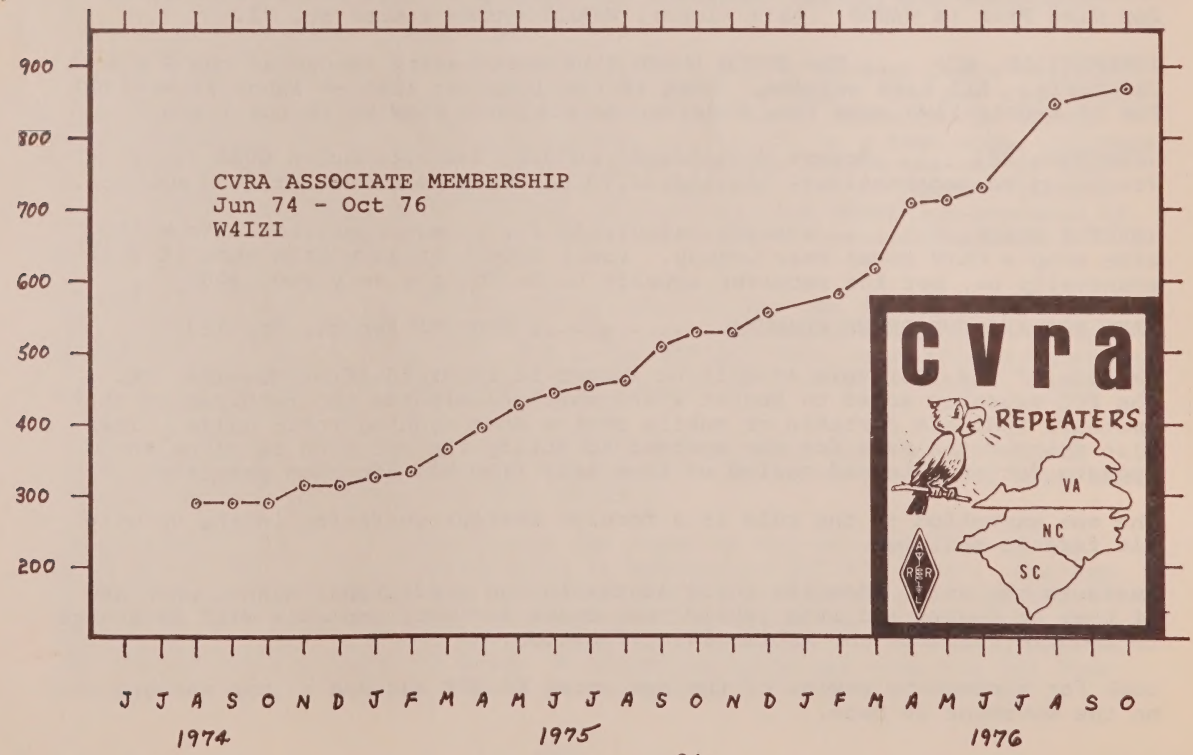
Trophies will be awarded to the highest scoring out of state station and the highest scoring NC station. Certificates will be awarded to the highest scoring stations in each State, Province, and Foreign Country, plus each North Carolina County.

The North Carolina Counties Award Certificate will be issued to any station participating in the QSO Party whose log verifies his contacting 30 or more counties during the party time period and has not been previously issued such a certificate by the AARC.

Suggested frequencies are +/- 10 kHz:

CW	3560	7060	14060	21060	28060
SSB	3900	7270	14290	21390	28590
Novice	3720	7120		21120	28120

See you in the contest..... let's make it a big one this year.



V I R G I N I A

(FARMVILLE, VA) ..... The CVRA would like to welcome the Five County Repeater Association into membership. The Five County Rptr Assn. sponsors WR4ASW, 146.31/146.91, which was placed into service on October 18, from its location atop a "high rise" dormatory at Longwood College. Using a temporary Ringo Ranger, the machine is providing about 30 mile coverage for mobiles and 50-60 miles for base stations. Officers of the FCRA are President, W4WWD; Vice President, WA4YIU; and Secretary/Treasurer, K4VWK. Representatives to CVRA are W4WWD and WA4YIU.

(ABINGDON, VA) ..... WR4ATJ, 146.01/146.61, has been in operation from atop Brumley Mountain since October 10. Excellent coverage has been reported. The machine is owned by K4LSP, Kingsport, Tn.

(ROANOKE, VA) .... WR4AMQ, 146.13/146.73, is still not on the air but plans still call for an installation on Tinker Mountain, at 2200', early in December 1976. It will have an autopatch.

(SALEM & GALAX, VA) .... WR4AFE, 28/88, in Roanoke, has been linked to WR4AHR, 69/09, in Galax, for about eight months now and is working quite well. Stations in western Carolina and Virginia may now easily work into the Roanoke Valley.

(ROANOKE, VA) .... WR4AFY, 146.38/146.98, is currently undergoing an overhaul with some improvements expected.

(WOODLAWN, VA) .... W4TAT is planning on a repeater here. No frequency recommended as yet.

(LYNCHBURG, VA) .... WR4AXO is the new call for the Lynchburg machine on 146.01/146.61.

(LYNCHBURG, VA) .... The Lynchburg ARC provided additional communications and transportation in its annual "Operation Halloween" for the Lynchburg City Police.

(SOUTH HILL, VA) .... WR4APF, planned for South Hill, may not materialize due to lack of support in trying to find a site. The machine was planned for 147.84/147.24.

(PETERSBURG, VA) .... WR4AWC, 147.99/147.39, is owned by Jackie McPherson and is now operational. The Motorola tube type equipment feeds through a DB Products 6 cavity duplexer into a Newtronics Master Gainer antenna at 100' HAAT. Power out is 150 watts ERP.

(PETERSBURG, VA) .... WR4ATB, 147.90/147.30, is still under construction.

(CHARLOTTESVILLE, VA) ..... WR4ADV is operational on 146.28/146.88 although they plan to move to 146.16/146.76 around December 1.

THE MIDDLE ATLANTIC FM AND REPEATER COUNCIL

On October 17, 1976, T-MARC had its annual elections. New officers include: PRESIDENT, Jeff Bixby, WA3WQF; VICE PRES (OPNS), Barrie Schwartz, W3ENL; VICE PRES (TECH), Mike Cox, K3GEG; SEC/TREAS, Mike Young, WA4OZJ; DIRECTORS, Don Search, W3AZD, Jack Nielsen, K3GUW, Jerry Horowitz, W3EZT.

T-MARC is our sister Council serving the Northern area of Virginia, DC, Maryland, and Delaware.

NEWS FROM NORTH CAROLINA REPEATERS

(FAYETTEVILLE, NC) ..... New Officers of the Cape Fear Amateur Radio Society: President - Pete, K4QFK; Vice President - Dave, K4FOY; Secretary/Treasurer - Bob, WA4FLR; Recorder - Larry, WA4RHY. Bob, WB4BPL remains as the Editor of the excellent monthly newsletter published by the CFARS.

(FAYETTEVILLE, NC) ..... On the night of October 30, the Cape Fear ARS conducted its annual "Operation Ghost Patrol", designed to give protective watch over 19 Fayetteville city schools, with particular interest in preventing vandalism. 22 club members participated with WB4FXM, the EC of Cumberland County, serving as Net Control. WR4ANN, 31/91, the club repeater, was utilized during the evening. Net Control operation was from the Civil Prepardness Communications Room in the Law Enforcement Center building. There were no reported vandalism in the watch areas. 66 man-hours was spent in this project and 215 miles were traveled.

(ROCKY MOUNT, NC) .... Work continues on the Rocky Mount Repeater to be operated on 147.72/147.12. Mike Wood, WA4UXU and Joe Warner, K4GWU, are coordinating the effort with numerous others carrying out specific tasks. The Phelps Dodge antenna will soon be mounted on the CATV tower and tests will begin shortly. A Dutch Supper meeting was held on November 10, to discuss progress and plans with interested amateurs. The WR call still has not been received.

(CARY, NC) .... A six meter repeater is in the works for this area. WB4MPD is planning on having a machine on 52.35/53.35. No start up date has been set.

(GRAHAM, NC) .... Ray Eggleston, K4KIP, will be one of the 220 repeater pioneers in North Carolina as he plans to put a machine up on 223.22/224.82. Let's give Ray our support and encouragement.

(GASTONIA, NC) .... WR4AXH will soon be on the air on 147.81/147.21 operated by Mac Johnson, K4ZFD. The machine will have an autopatch and will be set up for local coverage only.

(SMITHFIELD, NC) .... Bill Grimes, WB4AXH, is planning a local coverage machine for the Smithfield area to be operated on 146.37/146.97.

(WINSTON-SALEM, NC) ..... A group here is considering another two meter machine for the Winston area. No frequency has been established as yet.

(WILMINGTON, NC) .... WR4AHL, 22/82, has recently been equipped with a 2 1/2 minute timer which recycles only when the repeater carrier drops out. This means that if you are quick on the trigger, you will time out the machine very frequently. So when you are in the coastal area, remember the timer and let the machine drop out .

RECENT FCC NEWS ..... HR Report, Nr 117

CW comprehension tests for amateur exams should come into use shortly. Master tapes, test questions and procedures were put in final shape some time ago so only duplication, distribution, and field office training remain before the new procedure can be adopted. Target date now looks like January 1, 1977.

VHF NET REGISTER (LOCAL TIMES INDICATED)

TWO METERS (FM)

ANDERSON, SC	37/97	WR4AIO	ANDERSON RADIO CLUB NET	DAILY	2000
ASHEVILLE, NC	16/76	WR4AKR	WESTERN NORTH CAROLINA TFC NET	TUE	2030
BENSON, NC	87/27	WR4AOE	JOHNSTON ARS NET	DAILY	1930
BURLINGTON, NC	07/67	WR4AKY	ALAMANCE COUNTY AREC NET	MWF	2100
CATAWBA CO, NC	146.82		CATAWBA COUNTY RACES NET	MON	1900
CHARLOTTE, NC	34/94	WR4AEU	METROLINA 2 METER EMER. NET	DAILY	2100
DANVILLE, VA	10/70	WR4AHG	LAST CAPITAL SERVICE NET	MWF	2000
FAYETTEVILLE, NC	31/91	WR4ANN	CAPE FEAR ARS NET	DAILY	1900
FLORENCE, SC	37/97	WR4AGM	FLORENCE 2 METER NET	MON	2000
GREENSBORO, NC	72/12	WR4ANP	GUILFORD COUNTY EMERGENCY NET	THU	2100
GREENVILLE, SC	01/61	WR4ADG	BLUE RIDGE ARS NET	DAILY	2100
GRIFTON, NC	16/76	WR4ABP	ENC EMERGENCY NET	THU	2000
HAMPTON, VA	34/94	WR4AFT	HAMPTON ROADS EMERGENCY NET	WED	2000
LAURINBURG, NC	07/67	WR4AOX	SAND HILLS EMERGENCY NET	DAILY	1930
LYNCHBURG, VA	01/61	WR4ADY	LYNCHBURG TWO METER FM NET	TUE	1900
RALEIGH, NC	04/64	WR4ACF	RARS NET	MTTHF	2000
RICHMOND, VA	28/88	WR4ACW	AMATEUR TRAFFIC & TROUBLE NET	MTWTH	2030
SALISBURY, NC	13/73	WR4AAA	CENTRAL NORTH CAROLINA TFC NET	DAILY	2200
SUMTER, SC	10/70	WR4AOI	SUMTER RPTR ASSN 2 MTR NET	MON	2130
WINCHESTER, VA	22/82	WR4AGT	SHENANDOAH VALLEY SERVICE NET	DAILY	1915
WINSTON-SALEM, NC	04/64	WR4ARD	FORSYTH CO AREC/RACES NET	WED	2100

TWO METERS (SSB/CW/AM)

TIDEWATER SIDEBAND NET (2M)	NORFOLK, VA	145.025	TUE	2100
NORTH CAROLINA 2 METER SSB NET	GREENSBORO, NC	145.025	TUE	2000
MIDWESTERN SSB NET	CINCINNATI, OHIO	145.020	STTH	2100
S.L.O.T. NET	GREENVILLE, SC	145.025	MWF	2215
HAMPTON ROADS EMERGENCY NET(AM)	NORFOLK, VA	145.800	MON	2000
MID ATLANTIC 2 METER NET	WASHINGTON, DC	145.100	WED	2100

SIX METERS

INTERSTATE NET (SSB)	ATLANTA, GA	50.110	TUE	2100
DIXIE NET (SSB)	CHARLOTTE, NC	50.110	WED	2100
CHARLOTTE HORNET NET (AM)	CHARLOTTE, NC	50.400	SUN	2100
NORTH CAROLINA 6 METER NET(SSB)	GLENDALE SPRINGS, NC	50.120	THU	2100
NORTH CAROLINA 6 METER ASSN.	LEXINGTON, NC	50.120	SUN	0900
TIDEWATER SSB NET	NORFOLK, VA	50.150	TUE	2000
CENTRAL VIRGINIA NET (AM)	RICHMOND, VA	50.250	DAILY	1900

CVRA ELECTIONS TO BE HELD DURING NEXT 45 DAYS.....

Several problems have come up during the past two months which have delayed the Director elections which were scheduled for October.

Under the new Constitution and By-Laws changes each state will have one Director and one Vice Director elected for a two year term by the Representatives of member repeaters in their states. Nominating committees have submitted their candidates to the Secretary who will be mailing ballots to the repeater reps shortly.

ADDRESS CORRECTION REQUESTED

CAROLINAS - VIRGINIA REPEATER ASSN.
Post Office Box 3325
Burlington, North Carolina 27215

BULK RATE
U. S. POSTAGE
PAID
BURLINGTON, N.C. 27215
PERMIT NO. 271

BILL FINCH W4EHF
818 EMELINE AVE 1276F
FAYETTEVILLE, NC 28303

LET'S HAVE ALL REPEATER USERS AS ASSOCIATE MEMBERS.....

One of the prime objectives of the CVRA is to educate users of repeaters, so maximum enjoyment can be had by us all. We all hear newcomers on the local repeater asking questions as to procedure, where the repeaters are located, and advice on technical matters. The CVRA can be very effective in filling this need. So tell the "Newcomer" about CVRA, and see that he joins.

****

ASSOCIATE MEMBERSHIP APPLICATION CAROLINAS-VIRGINIA REPEATER ASSN, INC.

NAME: _____ CALL: _____ DATE: _____

ADDRESS: _____ PHONE: _____

CITY: _____ STATE: _____ ZIP: _____

MEMBER OF ARRL? _____ MY HOME REPEATER IS: _____

Enclosed is: _____$ 2.00/one year

_____$ 4.00/two years

Mail to;
Carolinas-Virginia Repeater Assn.
P. O. Box 3325
Burlington, NC 27215

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